

SEQUENCE LISTING

<110> Ruoslahti, Erkki  
Pasqualini, Renata  
Wadih, Arap  
Bredesen, Dale E.  
Ellerby, H. Michael

<120> Chimeric Prostate-Homing Peptides With  
Pro-Apoptotic Activity

<130> P-LJ 3844

<140> US 09/489,582  
<141> 2000-01-21

<160> 235

<170> FastSEQ for Windows Version 4.0

<210> 1  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 1  
Cys Asp Cys Arg Gly Asp Cys Phe Cys  
1 5

<210> 2  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 2  
Cys Gly Arg Glu Cys Pro Arg Leu Cys Gln Ser Ser Cys  
1 5 10

<210> 3  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 3  
Cys Asn Gly Arg Cys Val Ser Gly Cys Ala Gly Arg Cys  
1 5 10

<210> 4  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 4  
Cys Leu Ser Gly Ser Leu Ser Cys  
1 5

<210> 5  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 5  
Cys Gly Ser Leu Val Arg Cys  
1 5

<210> 6  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 6  
Asn Gly Arg Ala His Ala  
1 5

<210> 7  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 7  
Cys Val Leu Asn Gly Arg Met Glu Cys  
1 5

<210> 8  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 8  
Cys Asn Gly Arg Cys  
1 5

<210> 9

<220>  
<223> synthetic peptide

<400> 9  
000

<210> 10

<220>  
<223> synthetic peptide

<400> 10  
000

<210> 11

<220>  
<223> synthetic peptide

<400> 11  
000

<210> 12  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<221> VARIANT  
<222> (1)...(13)  
<223> Xaa = Any Amino Acid

<400> 12  
Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Cys  
1 5 10

<210> 13

<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<221> VARIANT  
<222> (1)...(9)  
<223> Xaa = Any Amino Acid

<400> 13  
Cys Xaa Xaa Xaa Asn Gly Arg Xaa Xaa  
1 5

<210> 14  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<221> VARIANT  
<222> (1)...(9)  
<223> Xaa = Any Amino Acid

<400> 14  
Cys Xaa Xaa Cys Asn Gly Arg Cys Xaa  
1 5

<210> 15  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 15  
Cys Asn Lys Thr Asp Gly Asp Glu Gly Val Thr Cys  
1 5 10

<210> 16  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 16  
Ala Cys Asp Cys Arg Gly Asp Cys Phe Cys Gly

1 5 10

<210> 17  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 17  
Gly Arg Gly Glu Ser Pro  
1 5

<210> 18  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 18  
Trp Gly Thr Gly Leu Cys  
1 5

<210> 19  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 19  
Gly Ala Cys Val Phe Ser Ile Ala His Glu Cys Gly Ala  
1 5 10

<210> 20  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 20  
Cys Gly Glu Ala Cys Gly Gly Gln Cys Ala Leu Pro Cys  
1 5 10

<210> 21  
<211> 9  
<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 21

Ile Trp Ser Gly Tyr Gly Val Tyr Trp  
1 5

<210> 22

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 22

Pro Ser Cys Ala Tyr Met Cys Ile Thr  
1 5

<210> 23

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 23

Trp Glu Ser Leu Tyr Phe Pro Arg Glu  
1 5

<210> 24

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 24

Ser Lys Val Leu Tyr Tyr Asn Trp Glu  
1 5

<210> 25

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 25  
Cys Gly Leu Met Cys Gln Gly Ala Cys Phe Asp Val Cys  
1 5 10

<210> 26  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 26  
Cys Glu Arg Ala Cys Arg Asn Leu Cys Arg Glu Gly Cys  
1 5 10

<210> 27  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 27  
Cys Pro Arg Gly Cys Leu Ala Val Cys Val Ser Gln Cys  
1 5 10

<210> 28  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 28  
Cys Lys Val Cys Asn Gly Arg Cys Cys Gly  
1 , 5 10

<210> 29  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 29  
Cys Glu Met Cys Asn Gly Arg Cys Met Gly  
1 5 10

<210> 30

<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 30  
Cys Pro Leu Cys Asn Gly Arg Cys Ala Leu  
1 5 10

<210> 31  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 31  
Cys Pro Thr Cys Asn Gly Arg Cys Val Arg  
1 5 10

<210> 32  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 32  
Cys Gly Val Cys Asn Gly Arg Cys Gly Leu  
1 5 10

<210> 33  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 33  
Cys Glu Gln Cys Asn Gly Arg Cys Gly Gln  
1 5 10

<210> 34  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 34

Cys Arg Asn Cys Asn Gly Arg Cys Glu Gly  
1 5 10

<210> 35

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 35

Cys Val Leu Cys Asn Gly Arg Cys Trp Ser  
1 5 10

<210> 36

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 36

Cys Val Thr Cys Asn Gly Arg Cys Arg Val  
1 5 10

<210> 37

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 37

Cys Thr Glu Cys Asn Gly Arg Cys Gln Leu  
1 5 10

<210> 38

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 38

Cys Arg Thr Cys Asn Gly Arg Cys Leu Glu  
1 5 10

<210> 39  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 39  
Cys Glu Thr Cys Asn Gly Arg Cys Val Gly  
1 5 10

<210> 40  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 40  
Cys Ala Val Cys Asn Gly Arg Cys Gly Phe  
1 5 10

<210> 41  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 41  
Cys Arg Asp Leu Asn Gly Arg Lys Val Met  
1 5 10

<210> 42  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 42  
Cys Ser Cys Cys Asn Gly Arg Cys Gly Asp  
1 5 10

<210> 43  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 43  
Cys Trp Gly Cys Asn Gly Arg Cys Arg Met  
1 5 10

<210> 44  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 44  
Cys Pro Leu Cys Asn Gly Arg Cys Ala Arg  
1 5 10

<210> 45  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 45  
Cys Lys Ser Cys Asn Gly Arg Cys Leu Ala  
1 5 10

<210> 46  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 46  
Cys Val Pro Cys Asn Gly Arg Cys His Glu  
1 5 10

<210> 47  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 47

Cys Gln Ser Cys Asn Gly Arg Cys Val Arg  
1 5 10

<210> 48  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 48  
Cys Arg Thr Cys Asn Gly Arg Cys Gln Val  
1 5 10

<210> 49  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 49  
Cys Val Gln Cys Asn Gly Arg Cys Ala Leu  
1 5 10

<210> 50  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 50  
Cys Arg Cys Cys Asn Gly Arg Cys Ser  
1 5

<210> 51  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 51  
Cys Ala Ser Asn Asn Gly Arg Val Val Leu  
1 5 10

<210> 52  
<211> 10

<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 52  
Cys Gly Arg Cys Asn Gly Arg Cys Leu Leu  
1 5 10

<210> 53  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 53  
Cys Trp Leu Cys Asn Gly Arg Cys Gly Arg  
1 5 10

<210> 54  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 54  
Cys Ser Lys Cys Asn Gly Arg Cys Gly His  
1 5 10

<210> 55  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 55  
Cys Val Trp Cys Asn Gly Arg Cys Gly Leu  
1 5 10

<210> 56  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 56  
Cys Ile Arg Cys Asn Gly Arg Cys Ser Val  
1 5 10

<210> 57  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 57  
Cys Gly Glu Cys Asn Gly Arg Cys Val Glu  
1 5 10

<210> 58  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 58  
Cys Glu Gly Val Asn Gly Arg Arg Leu Arg  
1 5 10

<210> 59  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 59  
Cys Leu Ser Cys Asn Gly Arg Cys Pro Ser  
1 5 10

<210> 60  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 60  
Cys Glu Val Cys Asn Gly Arg Cys Ala Leu  
1 5 10

<210> 61  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 61  
Gly Arg Ser Gln Met Gln Ile  
1 5

<210> 62  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 62  
His His Thr Arg Phe Val Ser  
1 5

<210> 63  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 63  
Ser Lys Gly Leu Arg His Arg  
1 5

<210> 64  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 64  
Val Ala Ser Val Ser Val Ala  
1 5

<210> 65  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 65

Trp Arg Val Leu Ala Ala Phe  
1 5

<210> 66

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 66

Lys Met Gly Pro Lys Val Trp  
1 5

<210> 67

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 67

Ile Phe Ser Gly Ser Arg Glu  
1 5

<210> 68

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 68

Ser Pro Gly Ser Trp Thr Trp  
1 5

<210> 69

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 69

Asn Pro Arg Trp Phe Trp Asp

1 5

<210> 70  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 70  
Gly Arg Trp Tyr Lys Trp Ala  
1 5

<210> 71  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 71  
Ile Lys Ala Arg Ala Ser Pro  
1 5

<210> 72  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 72  
Ser Gly Trp Cys Tyr Arg Cys  
1 5

<210> 73  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 73  
Ala Leu Val Gly Leu Met Arg  
1 5

<210> 74  
<211> 7  
<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 74

Leu Trp Ala Glu Met Thr Gly  
1 5

<210> 75

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 75

Cys Trp Ser Gly Val Asp Cys  
1 5

<210> 76

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 76

Asp Thr Leu Arg Leu Arg Ile  
1 5

<210> 77

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 77

Ser Lys Ser Ser Gly Val Ser  
1 5

<210> 78

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 78  
Ile Val Ala Asp Tyr Gln Arg  
1 5

<210> 79  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 79  
Val Trp Arg Thr Gly His Leu  
1 5

<210> 80  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 80  
Val Val Asp Arg Phe Pro Asp  
1 5

<210> 81  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 81  
Leu Ser Met Phe Thr Arg Pro  
1 , 5

<210> 82  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 82  
Gly Leu Pro Val Lys Trp Ser  
1 5

<210> 83

<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 83  
Ile Met Tyr Pro Gly Trp Leu  
1 5

<210> 84  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 84  
Cys Val Met Val Arg Asp Gly Asp Cys  
1 5

<210> 85  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 85  
Cys Val Arg Ile Arg Pro Cys  
1 5

<210> 86  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 86  
Cys Gln Leu Ala Ala Val Cys  
1 5

<210> 87  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 87

Cys Gly Val Gly Ser Ser Cys  
1 5

<210> 88

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 88

Cys Val Ser Gly Pro Arg Cys  
1 5

<210> 89

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 89

Cys Gly Leu Ser Asp Ser Cys  
1 5

<210> 90

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 90

Cys Gly Glu Gly His Pro Cys  
1 5

<210> 91

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 91

Cys Tyr Thr Ala Asp Pro Cys  
1 5

<210> 92  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 92  
Cys Glu Leu Ser Leu Ile Ser Lys Cys  
1 5

<210> 93  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 93  
Cys Pro Glu His Arg Ser Leu Val Cys  
1 5

<210> 94  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 94  
Cys Leu Val Val His Glu Ala Ala Cys  
1 5

<210> 95  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 95  
Cys Tyr Val Glu Leu His Cys  
1 5

<210> 96  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 96  
Cys Trp Arg Lys Phe Tyr Cys  
1 5

<210> 97  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 97  
Cys Phe Trp Pro Asn Arg Cys  
1 5

<210> 98  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 98  
Cys Tyr Ser Tyr Phe Leu Ala Cys  
1 5

<210> 99  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 99  
Cys Pro Arg Gly Ser Arg Cys  
1 5

<210> 100  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 100

Cys Arg Leu Gly Ile Ala Cys  
1 5

<210> 101  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 101  
Cys Asp Asp Ser Trp Lys Cys Pro  
1 5

<210> 102  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 102  
Cys Ala Gln Leu Leu Gln Val Ser Cys  
1 5

<210> 103  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 103  
Cys Tyr Pro Ala Asp Pro Cys  
1 5

<210> 104  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 104  
Cys Lys Ala Leu Ser Gln Ala Cys  
1 5

<210> 105  
<211> 7

<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 105  
Cys Thr Asp Tyr Val Arg Cys  
1 5

<210> 106  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 106  
Cys Gly Glu Thr Met Arg Cys  
1 5

<210> 107  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 107  
Gly Ile Cys Lys Asp Asp Trp Cys Gln  
1 5

<210> 108  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 108  
Thr Ser Cys Asp Pro Ser Leu Cys Glu  
1 5

<210> 109  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 109  
Lys Gly Cys Gly Thr Arg Gln Cys Trp  
1 5

<210> 110  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 110  
Tyr Arg Cys Arg Glu Val Leu Cys Gln  
1 5

<210> 111  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 111  
Cys Trp Gly Thr Gly Leu Cys  
1 5

<210> 112  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 112  
Trp Ser Cys Ala Asp Arg Thr Cys Met  
1 5

<210> 113  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 113  
Ala Gly Cys Arg Leu Lys Ser Cys Ala  
1 5

<210> 114  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 114  
Ser Arg Cys Lys Thr Gly Leu Cys Gln  
1 5

<210> 115  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 115  
Pro Ile Cys Glu Val Ser Arg Cys Trp  
1 5

<210> 116  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 116  
Trp Thr Cys Arg Ala Ser Trp Cys Ser  
1 5

<210> 117  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 117  
Gly Arg Cys Leu Leu Met Gln Cys Arg  
1 5

<210> 118  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 118  
Thr Glu Cys Asp Met Ser Arg Cys Met  
1 5

<210> 119  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 119  
Ala Arg Cys Arg Val Asp Pro Cys Val  
1 5

<210> 120  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 120  
Cys Ile Glu Gly Val Leu Gly Gly Cys  
1 5

<210> 121  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 121  
Cys Ser Val Ala Asn Ser Cys  
1 5

<210> 122  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 122  
Cys Ser Ser Thr Met Arg Cys

1 5

<210> 123  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 123  
Ser Ile Asp Ser Thr Thr Phe  
1 5

<210> 124  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 124  
Gly Pro Ser Arg Val Gly Gly  
1 5

<210> 125  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 125  
Trp Trp Ser Gly Leu Glu Ala  
1 5

<210> 126  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 126  
Leu Gly Thr Asp Val Arg Gln  
1 5

<210> 127  
<211> 7  
<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 127

Leu Val Gly Val Arg Leu Leu  
1 5

<210> 128

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 128

Gly Arg Pro Gly Asp Ile Trp  
1 5

<210> 129

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 129

Thr Val Trp Asn Pro Val Gly  
1 5

<210> 130

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 130

Gly Leu Leu Leu Val Val Pro  
1 5

<210> 131

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 131  
Phe Ala Ala Thr Ser Ala Glu  
1 5

<210> 132  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 132  
Trp Cys Cys Arg Gln Phe Asn  
1 5

<210> 133  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 133  
Val Gly Phe Gly Lys Ala Leu  
1 5

<210> 134  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 134  
Asp Ser Ser Leu Arg Leu Pro  
1 5

<210> 135  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 135  
Lys Leu Trp Cys Ala Met Ser  
1 5

<210> 136

<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 136  
Ser Leu Val Ser Phe Leu Gly  
1 5

<210> 137  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 137  
Gly Ser Phe Ala Phe Leu Val  
1 5

<210> 138  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 138  
Ile Ala Ser Val Arg Trp Ala  
1 5

<210> 139  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 139  
Thr Trp Gly His Leu Arg Ala  
1 5

<210> 140  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 140

Gln Tyr Arg Glu Gly Leu Val  
1 5

<210> 141

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 141

Gln Ser Ala Asp Arg Ser Val  
1 5

<210> 142

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 142

Tyr Met Phe Trp Thr Ser Arg  
1 5

<210> 143

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 143

Leu Val Arg Arg Trp Tyr Leu  
1 5

<210> 144

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 144

Thr Ala Arg Gly Ser Ser Arg  
1 5

Q92GK6 E92GK6 E92GK6 E92GK6 E92GK6 E92GK6

<210> 145  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 145  
Thr Thr Arg Glu Lys Asn Leu  
1 5

<210> 146  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 146  
Pro Lys Trp Leu Leu Phe Ser  
1 5

<210> 147  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 147  
Leu Arg Thr Asn Val Val His  
1 5

<210> 148  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 148  
Ala Val Met Gly Leu Ala Ala  
1 5

<210> 149  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 149  
Val Arg Asn Ser Leu Arg Asn  
1 5

<210> 150  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 150  
Thr Asp Cys Thr Pro Ser Arg Cys Thr  
1 5

<210> 151  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 151  
Ser Trp Cys Gln Phe Glu Lys Cys Leu  
1 5

<210> 152  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 152  
Val Pro Cys Arg Phe Lys Gln Cys Trp  
1 5

<210> 153  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 153

Cys Thr Ala Met Arg Asn Thr Asp Cys  
1 5

<210> 154  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 154  
Cys Arg Glu Ser Leu Lys Asn Cys  
1 5

<210> 155  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 155  
Cys Met Glu Met Gly Val Lys Cys  
1 5

<210> 156  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 156  
Val Thr Cys Arg Ser Leu Met Cys Gln  
1 5

<210> 157  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 157  
Cys Asn Asn Val Gly Ser Tyr Cys  
1 5

<210> 158  
<211> 8

<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 158  
Cys Gly Thr Arg Val Asp His Cys  
1 5

<210> 159  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 159  
Cys Ile Ser Leu Asp Arg Ser Cys  
1 5

<210> 160  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 160  
Cys Ala Met Val Ser Met Glu Asp  
1 5

<210> 161  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 161  
Cys Tyr Leu Gly Val Ser Asn Cys  
1 5

<210> 162  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 162  
Cys Tyr Leu Val Asn Val Asp Cys  
1 5

<210> 163  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 163  
Cys Ile Arg Ser Ala Val Ser Cys  
1 5

```
<210> 164
<211> 9
<212> PRT
<213> Artificial Sequence
```

<220>  
<223> synthetic peptide

<400> 164  
Leu Val Cys Leu Pro Pro Ser Cys Glu  
1 5

<210> 165  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 165  
Arg His Cys Phe Ser Gln Trp Cys Ser  
1 5

<210> 166  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 166  
Phe Tyr Cys Pro Gly Val Gly Cys Arg  
1 5

<210> 167  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 167  
Ile Ser Cys Ala Val Asp Ala Cys Leu  
1 5

<210> 168  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 168  
Glu Ala Cys Glu Met Ala Gly Cys Leu  
1 5

<210> 169  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 169  
Pro Arg Cys Glu Ser Gln Leu Cys Pro  
1 5

<210> 170  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 170  
Arg Ser Cys Ile Lys His Gln Cys Pro  
1 5

<210> 171  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 171  
Gln Trp Cys Ser Arg Arg Trp Cys Thr  
1 5

<210> 172  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 172  
Met Phe Cys Arg Met Arg Ser Cys Asp  
1 5

<210> 173  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 173  
Gly Ile Cys Lys Asp Leu Trp Cys Gln  
1 5

<210> 174  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 174  
Asn Ala Cys Glu Ser Ala Ile Cys Gly  
1 5

<210> 175  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 175  
Ala Pro Cys Gly Leu Leu Ala Cys Ile

1 5

<210> 176  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 176  
Asn Arg Cys Arg Gly Val Ser Cys Thr  
1 5

<210> 177  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 177  
Phe Pro Cys Glu Gly Lys Lys Cys Leu  
1 5

<210> 178  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 178  
Ala Asp Cys Arg Gln Lys Pro Cys Leu  
1 5

<210> 179  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 179  
Phe Gly Cys Val Met Ala Ser Cys Arg  
1 5

<210> 180  
<211> 9  
<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 180

Ala Gly Cys Ile Asn Gly Leu Cys Gly  
1 5

<210> 181

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 181

Arg Ser Cys Ala Glu Pro Trp Cys Tyr  
1 5

<210> 182

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 182

Asp Thr Cys Arg Ala Leu Arg Cys Asn  
1 5

<210> 183

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 183

Gly Arg Cys Val Asp Gly Gly Cys Thr  
1 5

<210> 184

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 184  
Tyr Arg Cys Ile Ala Arg Glu Cys Glu  
1 5

<210> 185  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 185  
Lys Arg Cys Ser Ser Ser Leu Cys Ala  
1 5

<210> 186  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 186  
Ile Cys Leu Leu Ala His Cys Ala  
1 5

<210> 187  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 187  
Gln Ala Cys Pro Met Leu Leu Cys Met  
1 , 5

<210> 188  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 188  
Leu Asp Cys Leu Ser Glu Leu Cys Ser  
1 5

<210> 189

<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 189  
Ala Gly Cys Arg Val Glu Ser Cys  
1 5

<210> 190  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 190  
His Thr Cys Leu Val Ala Leu Cys Ala  
1 5

<210> 191  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 191  
Ile Tyr Cys Pro Gly Gln Glu Cys Glu  
1 5

<210> 192  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 192  
Arg Leu Cys Ser Leu Tyr Gly Cys Val  
1 5

<210> 193  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 193

Arg Lys Cys Glu Val Pro Gly Cys Gln  
1 5

<210> 194

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 194

Glu Asp Cys Thr Ser Arg Phe Cys Ser  
1 5

<210> 195

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 195

Leu Glu Cys Val Val Asp Ser Cys Arg  
1 5

<210> 196

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 196

Glu Ile Cys Val Asp Gly Leu Cys Val  
1 5

<210> 197

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 197

Arg Trp Cys Arg Glu Lys Ser Cys Trp  
1 5

<210> 198  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 198  
Phe Arg Cys Leu Glu Arg Val Cys Thr  
1 5

<210> 199  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 199  
Arg Pro Cys Gly Asp Gln Ala Cys Glu  
1 5

<210> 200  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 200  
Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Lys  
1 5 10

<210> 201  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 201  
Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala  
1 5 10

<210> 202  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 202

Lys Ala Ala Lys Lys Ala Ala Lys Ala Ala Lys Lys Ala Ala  
1 5 10

<210> 203

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 203

Lys Leu Gly Lys Lys Leu Gly Lys Leu Gly Lys Lys Leu Gly Lys Leu  
1 5 10 15  
Gly Lys Lys Leu Gly  
20

<210> 204

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 204

Asp Leu Ser Leu Ala Arg Leu Ala Thr Ala Arg Leu Ala Ile  
1 5 10

<210> 205

<220>

<223> synthetic peptide

<400> 205

000

<210> 206

<220>

<223> synthetic peptide

<400> 206

000

<210> 207

<211> 7

<212> PRT



<400> 211  
Gly Arg Leu Ser Val Gln Val  
1 5

<210> 212  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 212  
Trp Lys Pro Ala Ser Leu Ser  
1 5

<210> 213  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 213  
Phe Ala Val Arg Val Val Gly  
1 5

<210> 214  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 214  
Leu Val Arg Pro Leu Glu Gly  
1 , 5

<210> 215  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 215  
Gly Phe Tyr Arg Met Leu Gly  
1 5

<210> 216

<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 216  
Glu Gly Arg Pro Met Val Tyr  
1 5

<210> 217  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 217  
Gly Ser Arg Ser Leu Gly Ala  
1 5

<210> 218  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 218  
Arg Val Trp Gln Gly Asp Val  
1 5

<210> 219  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 219  
Gly Asp Glu Leu Leu Ala  
1 5

<210> 220  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 220

Phe Val Trp Leu Val Gly Ser  
1 5

<210> 221

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 221

Gly Ser Glu Pro Met Phe Arg  
1 5

<210> 222

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 222

Val Ser Phe Leu Glu Tyr Arg  
1 5

<210> 223

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic peptide

<400> 223

Trp His Gln Pro Leu  
1 5

<210> 224

<211> 7

<212> PRT

<213> eArtificial Sequence

<220>

<223> synthetic peptide

<400> 224

Arg Gly Arg Trp Leu Ala Leu  
1 5

<210> 225  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 225  
Gln Val Glu Glu Phe Pro Cys  
1 5

<210> 226  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 226  
Leu Trp Leu Ser Gly Asn Trp  
1 5

<210> 227  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 227  
Gly Pro Met Leu Ser Val Met  
1 5

<210> 228  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 228  
Trp Thr Phe Leu Glu Arg Leu  
1 5

<210> 229  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 229  
Val Leu Pro Gly Gly Gln Trp  
1 5

<210> 230  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 230  
Arg Glu Val Lys Glu Ser  
1 5

<210> 231  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 231  
Arg Thr Pro Ala Ala Val Met  
1 5

<210> 232  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 232  
Gly Glu Trp Leu Gly Glu Cys  
1 5

<210> 233  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 233

Pro Asn Pro Leu Met Pro Leu  
1 5

<210> 234  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 234  
Ser Leu Trp Tyr Leu Gly Ala  
1 5

<210> 235  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic peptide

<400> 235  
Tyr Val Gly Gly Trp Glu Leu  
1 5